

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject code: 725303

Date: 20-06-2014

Subject Name: Mobile Ad Hoc Networks

Time: 02:30 pm - 05:00 pm

Total Marks: 70

Instructions:

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full mark.**

Q. No. 1

- a. Explain various issues and challenges in providing Quality of Services (QoS) in Ad hoc network. [7 Marks]
- b. Suggest different approaches to make AODV power aware routing protocol. [7 Marks]

Q. No. 2

- a. Compare AODV, DSDV and DSR in terms of support for high mobility, overhead, route metric and reconfiguration methodology. [7 Marks]
- b. List the issues that affect the design deployment and performance of Ad hoc wireless system. [7 Marks]

OR

- b. Explain how to do multicasting in DSR and AODV in detail. [7 Marks]

Q. No. 3

- a. Differentiate between On-demand & Table driven with respect to following parameters:
 - I. Availability of routing information
 - II. Periodic route updates
 - III. Coping with mobility
 - IV. Signaling traffic [8 Marks]
- b. Give the difference between cellular networks and ad hoc wireless networks. [6 Marks]

OR

Q. No. 3

- a. Discuss the three MAC services provided by the IEEE 802.11 that are not provided in the traditional LAN's such as 802.3. [7 Marks]
- b. Discuss the various HiperLAN standards defined for wireless Networks by ETSI. [7 Marks]

Q. No. 4

- a. What are the advantages and disadvantages of dynamic source routing protocol (DSRP)? [7 Marks]
- b. Mention & explain any three qualities of service metrics that are used to evaluate the performance of the network. [7 Marks]

OR

Q. No. 4

- a. Explain the issues in designing a transport layer protocol for Ad hoc wireless networks. [7 Marks]
- b. Explain the types of Ad hoc network routing protocols based on routing information update mechanism. [7 Marks]

Q. No. 5

- a. Is hoplength always the best metric for choosing paths in MANETs? Justify your answer. [7 Marks]
- b. With suitable trace, explain the route establishment in location aided routing. [7 Marks]

OR

Q. No. 5

- a. List the characteristics of ideal routing protocol for ad hoc wireless network. [7 Marks]
- b. Both ABR and SSA use stability information for routing. How do they differ in using the stability information? Explain in brief about ABR traffic management. [7 Marks]
